PREHOSPITAL MEDICINE

Developing a community paramedic practitioner intermediate care support scheme for older people with minor conditions

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Introduction: The Department of Health document *Reforming emergency care* stated that new initiatives need to be developed to improve the care and assessment of patients. The Audit Commission has suggested that ambulance services should be allowed to decide who should be sent to each type of emergency and treat some patients at home.

Aims: This scheme explores a new way of providing clinical assessment of older patients in their homes or in care homes within Sheffield. It sets out to provide a very patient centred model of care by providing community based clinical assessment for patients presenting to the emergency services with minor acute conditions.

Scope, development, and structure of scheme: The scheme trains paramedic practitioners in the assessment and treatment of minor conditions to emergency nurse practitioner level. It consists of a three week full time theory based course and a 45 day period of supervised clinical practice based in the emergency department, minor injury unit, care of the elderly falls clinic, and with community services. Subsequently, the competence of the practitioners is assessed.

Service delivery: The service will be activated by a 999 call between 0800 to 2000 each day. It is anticipated that between 25% to 50% of patients eligible to receive the service will be assessed and treated within the home. This approach to providing emergency care is untested and the frequency of use, patient acceptability, safety, and cost effectiveness are unknown, therefore rigorous assessment is essential through a randomised controlled trial.

RATIONALE FOR DEVELOPING THE NEW SERVICE

The current state of emergency services in the UK

The increasing number of emergency medical admissions is one of the most important problems faced by the NHS.[1] The recent Department of Health document *Reforming emergency care*[2] has emphasised the problems encountered by people in using the present emergency services. It also states that new initiatives need to be developed to improve the initial care and assessment of patients so that needs are met in an optimal way. The Audit Commission report[3] questioned the need for a fully crewed ambulance to attend all 999 calls and has suggested that ambulance services should be allowed to decide who should be sent to each type of emergency and treat some patients at home without transfer to hospital.

Extending the role of health care professionals

The NHS Plan[4] outlines greater opportunities in the future for NHS staff to extend their roles. In 2000 the Joint Royal Colleges Ambulance Liaison Committee[5] reported on the future role of paramedics and emphasised the need to train and educate a higher level of practitioner in emergency care with skills that could be used in the community. Previous studies have shown that paramedic skills can be increased to assess and treat certain conditions in the community such as wounds,[6] cervical spine injury,[7] and stroke.[8] A study by in the UK has evaluated the use of "treat and refer" protocols for minor conditions by ambulance staff.[9] This allowed them to leave appropriate patients on scene with referral or self care advice. The introduction of the new scheme was found to be acceptable to patients with no safety concerns identified. The study has recommended further work to evaluate the use of such schemes.

The effect of emergency services on older people

The steady increase in the size and age of our older population has had a major effect on emergency services within the UK, and this will be an even greater pressure in the future. A recent sytematic review[10] has shown that 12% to 21% of visits to the emergency department (ED) are by older people. They are more likely to arrive at the ED by ambulance than younger people, and more likely to be admitted to hospital once there. The National Service Framework for Older People[11] states that new initiatives need to be developed to improve access and assessment of older patients. One response to this is the investment in intermediate care. The support structures for intermediate care are not fully worked out and there remains a gap in provision. This gap is often results in 999 calls and increased demands on the ambulance service. Older people are particularly affected by travelling to hospital after a comparatively minor event. Treatment of some minor conditions in the community has been shown to be possible and preferable to hospital attendance provided the service is medically and socially equipped for this purpose. However, there is little research to date on the effectiveness of clinical interventions designed specifically for older people accessing emergency services. Individuals delivering acute services to older people should be specially trained in dealing with the specific problems encountered particularly in relation to reducing the need for ED visits, follow up, and further referral by specialised community services.

AIMS OF THE SERVICE

An increasing number of older people living in the community require emergency care. Many of these emergencies will be attributable to minor injuries or falls. The current response of transporting such patients to a busy emergency department

Figure 1

may not be the best way of managing these people. This scheme explores a new way of providing clinical assessment of older patients in their homes or in care homes within Sheffield. It sets out to provide a very patient centred model of care by providing community based clinical assessment for patients >60 years presenting to the emergency services with minor acute conditions such as minor injury (wounds, burns, musculoskeletal injury, head injury) and minor illness (falls, blackouts, epistaxis). It hopes to improve the experience of older people with minor acute conditions while also reducing the numbers of older people attending the ED. In addition, for those older patients who do require ED care, it is anticipated that waiting times will be reduced by the use of fast track mechanisms such as rapid transfer to radiology. It has been set up through the collaboration of the South Yorkshire Ambulance Service, the Emergency Department of the Northern General Hospital, Department of Care of the Elderly at the Northern General Hospital, and the Community Social Services Team.

This approach is untested and the frequency of use, patient acceptability, safety, and cost effectiveness are unknown. This makes a rigorous assessment essential.

SCOPE OF PRACTICE

The paramedic practitioner has been trained in the following skills;

•The assessment and treatment of minor injury to emergency nurse practitioner level, excluding radiological interpretation but including the indications for radiography and requesting radiography. This includes the treatment of minor wounds, wound infections, soft tissue injuries and the requesting of radiographs where appropriate.

- The assessment of minor head injury
- The assessment of mental function (abbreviated mental test score)
- The assessment of the older patient with a fall
- The social care assessment of the older patient

COURSE DEVELOPMENT AND STRUCTURE

The course was developed in conjunction with Sheffield Hallam University. It consists of a three week full time theory based course. This is lecture based and contains all the theoretical information the paramedics will need to become practitioners. Most of the lectures are given by emergency medicine or care of the elderly specialists. After this, the paramedics spend a period of 45 days in supervised practice (fig 1). These sessions are based in the ED, minor injury unit, falls clinic (a clinic run by care of the elderly specialists to investigate causative factors for falls among older people) and with community services such as physiotherapy, occupational therapy, and social services. Here the paramedics gain the practical skills and clinical exposure that equip them to practice autonomously. It also gives them experience in referral processes to other hospital specialties, GPs, district nursing services, and community social services teams.

The course builds on the existing knowledge and skills of the paramedics. It is worth 60 credits at diploma or degree level. In addition, paramedics can use the credits to contribute towards a BA (Hons) in Health Care Practice.

Box 1 Skills of the paramedic practitioner

Practical skills
- Local anaesthetic techniques
- Wound care and suturing techniques
- Principles of dressings and splintage

Special skills
- Joint examination
- Neurological, cardiovascular, and respiratory system examination
- ENT examination
- Radiograph requests
- Protocol led dispensing: simple analgesia, antibiotics, tetanus toxoid
- Mobility and social needs assessment
- Referral processes: GP, district nurse, community social services, etc

PRACTICAL AND SPECIAL SKILLS

The paramedics are taught a range of skills in addition to those they have already as shown in box 1. A great deal of care has been taken in planing referral mechanisms after patient assessment. The range of services that may be required include A&E attendance (either immediate or to a follow up clinic), district nurse, GP, or social services. The scheme has developed guidelines for the practitioners to follow when patients require further intervention or evaluation either that day, or in the coming days.

ASSESSMENT OF COMPETENCE

The competence of the practitioners is assessed in several ways. The practitioners complete two essays, one on an area of reflective practice and the other involving skills and knowledge. They also develop a portfolio of learning throughout their training period that they can use for later reference. Finally, all the practitioners undertake an OSCE examination of their knowledge and practical skills, similar to that used for our emergency nurse practitioners.

SERVICE DELIVERY

Activation

The service will initially be active between the hours of 0800 to 2000 each day. The service will start with activation by a 999 call. The following criteria will be applied and activate a practitioner response

- Over 60 years of age.
- Within Sheffield as defined by certain post codes
- Not category "A" call
- Patient has a problem that will probably fall within the criteria for practitioner care. This will be defined by specific AMPDS codes.

It is anticipated that between 25% to 50% of patients eligible to receive the service will be assessed and treated within the home. The remainder may require transport to the ED for

further investigation (most commonly for radiography). In addition other ambulance crews will be able to activate a practitioner response. In those cases where transport is required, paramedic practitioners in modified cars will take the patient to the ED. It is hoped that in the future primary care or social care may be able to activate the service. Direct referral from nursing homes is another possibility being explored.

Clinical support

Clinical support for the practitioners is essential in order to provide a high quality service. Senior ED medical staff will be on hand over the telephone to provide advice and support throughout the operational hours.

Equipment

The paramedic practitioners will drive specially adapted vehicles that will be equipped with everything they need to deal with the acute conditions they will treat. This includes equipment for wound management (such as suturing packs, local anaesthetic, dressings), splints, cannulas and phlebotomy equipment, ECG machine, sphygmomanometer, radiography request cards, documentation material, referral letters, drugs for prescribing under protocol led dispensing patient group directions.

SERVICE EVALUATION

This approach to providing emergency care is untested and the frequency of use, patient acceptability, safety, and cost effectiveness are unknown. Rigorous assessment is essential. In 2003, it is anticipated that a randomised controlled trial will compare the new service providing emergency clinical assessment and treatment by eight community paramedic practitioners for older people calling 999 following minor acute events with the current standard service that entails ambulance transfer to and management in the nearest ED. Eligible patients will be identified through their AMPDS codes. They will then be randomised to new service in the home or standard care by ED.

There are number of outcomes to be evaluated which are both patient orientated and process orientated. These are listed in box 2.

Box 2 Patient and process oriented outcome to be evaluated

Patient outcomes
- Patient experiences and satisfaction with the new service
- Patient time from 999 call to completion of the initial care episode
- Patient health status at four weeks measured using the EQ-5D[12]
- Satisfaction of carers where appropriate using a caregiver strain index[13]

Process outcomes
- Level of appropriateness of ED attendance
- Place of treatment of patients meeting the despatch criteria
- Economic evaluation of the new service

FUTURE DEVELOPMENTS OF THE SERVICE

Any future developments largely depend on the success of the trial. If successful we plan to extend the activation and availability of the service. It is essential that quality is monitored, with regular updates for the paramedic practitioners.

CONCLUSION

An increasing number of older people living in the community require emergency care. Many of these emergencies will be caused by minor injuries or falls. The current response of transporting such patients to a busy ED may not be the best way of managing these patients. This new scheme involves the development of a paramedic practitioner service for older people with minor acute conditions for whom 999 is called. Using specially designed guidelines, paramedic practitioners will assess and treat some patients in their place of residence after a minor acute event. When necessary, they will fast track patients to the ED. The service aims to reduce the number of unnecessary hospital attendances for older people with minor acute conditions and to improve the experience of emergency care for older people and carers who call 999 with minor acute conditions.

To evaluate its success the new service will be subject to a randomised controlled trial in 2003. The future development of this service will depend on the success of the trial.

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REFERENCES

1 **Blatchford O**, Capewell S. Emergency medical admissions: taking stock and planning for winter. *BMJ* 1997;**315**:1322–3.
2 **Department of Health**. *Reforming emergency care*. London: Department of Health, 2001.
3 **Audit Commission**. *Life in the fast lane, A: value for money in emergency ambulance services*. London: Audit Commission Report, 1998.
4 **Department of Health**. *The NHS Plan*. London: Department of Health, 2001.
5 **Joint Royal Colleges Ambulance Liaison Committee**. *The future role and education of Paramedic Ambulance Service Personnel*. London: 2000.
6 **Hale D**, Sipprell K. Ability of EMT-Bs to determine which wounds can be prepared in the field. *Prehospital Emergency Care* 2000;**4**:245–9.
7 **Pennardt A**, Zehner J. Paramedic documentation of indicators for cervical spine injury. *Prehospital and Disaster Medicine* 1994;**9**:59–62.
8 **Smith WS**, Isaacs M, Corry MD. Accuracy of paramedic identification of stroke and transient ischaemic attack in the field. *Prehospital Emergency Care* 1998;**2**:170–5.
9 **NHS Executive**. *"Treat and refer" protocols: the development, costs and consequences of a new response to patients with non-urgent clinical needs who call for an emergency ambulance service*. London: NHS, 2001.
10 **Aminzadeh F**, Dalziel WB. Older adults in the emergency department: a sytematic review of patterns of use, adverse outcomes, and effectiveness of interventions. *Ann Emerg Med* 2002;**39**:238–47.
11 **Department of Health** . *National Service framework for older people*. London: Department of Health, 2001.
12 **The EuroQol Group**. EuroQol-a new facility for the measurement of health-related quality of life. *Health Policy* 1990;**16**:199–208.
13 **Robinson BC**. Validation of a caregiver strain index. *J Gerontol* 1993;**38**:344–8.